

TEMPLATE

KEY PROJECT INFORMATION & VPA DESIGN DOCUMENT (VPA DD)

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VERSION **v.2.3**

RELATED SUPPORT

- [Programme of Activity requirements](#)

- [TEMPLATE GUIDE VPA Design Document](#)

This document contains the following sections

Section A – Description of project

Section B - Application of approved Gold Standard Methodology (ies) and/or demonstration of SDG Contributions

Section C – Duration and crediting period

Section D – Summary of Safeguarding Principles and Gender Sensitive Assessment

Section E – Summary of Local stakeholder consultation

Section F - Eligibility and inclusion criteria for VPAs inclusion

Appendix 1 – Safeguarding Principles Assessment (mandatory)

Appendix 2- Contact information of VPA Implementer (mandatory)

Appendix 3 – LUF Additional Information (VPA specific)

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KEY PROJECT INFORMATION

Type of VPA	☒ Real case VPA ☐ Regular VPA
Scale of VPA Note that a VPA can be of one scale. Please select applicable scale accordingly.	☐ Microscale ☐ Small scale ☒ Large scale
Title of corresponding real case VPA (if applicable)	GS12602 VPA-1 Powerstove Multiple Fuel Project
GS ID of real case VPA (if applicable)	GS 12677
GS ID of VPA	NA
Title of VPA	NA
Time of First Submission Date	28/03/2024
Date of Design Certification	To be filled
Version number of the VPA-DD	04.0
Completion date of version	10/05/2026
Coordinating/managing entity	EKI Energy Services Limited
VPA Implementer (s)	EKI Energy Services Limited
Project Participants and any communities involved	Powerstove Offgrid Electricity Limited
Host Country (ies)	Nigeria
GS ID and Title of applicable Design Certified VPA	-
GS ID and Title of applicable Performance Certified VPA	-
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A

Other Requirements applied	NA
Methodology (ies) applied and version number	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version: 4.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A
VPA Cycle:	☐ Regular ☒ Retroactive

Table 1 – Estimated Sustainable Development Contributions

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6.)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
4 Quality Education			
 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.	Indicator 4.4.1: Number of employees provided skill development training	10 (Estimated)	Number
7 Affordable Clean Energy			
 7.3 By 2030, double the global rate of improvement in energy efficiency	Indicator 7.3.1: Total energy savings.	1,724	TJ
8 Decent Work and Economic Growth			
 8.5 By 2030, achieve full and productive employment and	Indicator 8.5.1 Total number of jobs. Project-specific Indicator: Total man-hours of employment	15,000 (Estimated)	man-hours

decent work for all women created during
and men, including for young project
people and persons with implementation.
disabilities, and equal pay for
work of equal value

13 Climate Action



Indicator 13.2.1:

Amount of GHGs
emissions avoided
or sequestered.

106,798

tCO₂e

13.2 Integrate climate change
measures into national
policies, strategies, and
planning

15 Life on Land



Indicator 15.1.1:

Total non-
renewable wood
fuel saved.

31,290

tonnes of non-
renewable
biomass /Year

15.1 By 2020, ensure the
conservation, restoration and
sustainable use of terrestrial
and inland freshwater
ecosystems and their
services, in particular forests,
wetlands, mountains and
drylands, in line with
obligations under
international agreements.

SECTION A. DESCRIPTION OF PROJECT

A.1. Purpose and general description of project

The main purpose of the project activity is the distribution of fuel-efficient improved cook stoves (ICS) in Nigeria. The VPA is implemented in Nigeria, primarily in Enugu State. The project covers selected rural and peri-urban communities within the state, The Improved cook-stoves distributed through this project has replaced the low-efficient traditional cook-stoves.

Through this project, the distribution and installation of high thermal efficient improved cook stoves (ICS) i.e. the Power Stove (dual fuel: firewood and charcoal) developed by Powerstove Energy has been undertaken for households. The ICS burns non-renewable woody biomass and/or charcoal more efficiently thereby improving thermal energy transfer to pots, hence saving fuel wood/charcoal and greenhouse gases. Not only will this halt the rapidly progressing deforestation but will also reduce health hazards from indoor air (smoke) pollution and women and children will have to spend less time collecting firewood.

The project boundary includes households in targeted communities where ICS are distributed. As the target populations are unable to afford these stoves (ICS), project promoters have distributed ICS at a very low cost as compare to its original price. The end-user has been informed in advance that the use of ICS generates carbon finance which in turn is used to cover the price of ICS and for recovering project implementation costs.

The baseline scenario is the ongoing use of non-renewable wood fuel (firewood/charcoal) by the target population. This usage serves to fulfill similar thermal energy needs as those addressed by the project cook stoves in the absence of project activities. Baseline fuel scenario and consumption was determined through Kitchen Performance Tests (KPT) and surveys, confirming inefficient energy use and high emissions.

A.1.1. Eligibility of the VPA under approved PoA

According to clause 4.12.1 of GS Programme of Activity Requirements and Procedures v.2.1, the VPA fulfils the following eligibility criteria-

NO.	ELIGIBILITY CRITERION	DESCRIPTION/ REQUIRED CONDITION	DESCRIPTION OF THE VPA IN RELATION TO THE CRITERIA,
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		MEANS OF VERIFICATION AND SUPPORTING EVIDENCE FOR INCLUSION
a. Project Location	The geographical boundaries of VPAs are consistent with the geographical boundary of the PoA	The geographical boundary of the VPA is within the geographical boundary of the PoA, i.e. Nigeria. Evidence for inclusion: KML file
b. Avoiding Double Counting	Conditions to avoid double counting of impacts, such as unique identifications of product and end user locations	Each cookstove installed in this VPA is provided a unique serial no. ensuring that they are uniquely identifiable to this project. These numbers are available in the distribution database which will be submitted during the verification.
c. Start Date of the VPA	Conditions to check the start dates of VPA through documentary evidence	The start date of the VPA has been set as 27/04/2023, adhering to the requirements of 5.4.1 of GS Programme of Activity Requirements and Procedures v.2.1. The selected date can be supported by the end-user agreement.
d. Applicability	Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardised baselines and the other applied methodological regulatory documents	The VPA complies with the applicability of the applied methodologies, the applied standardised baselines and the other applied methodological regulatory documents in the PoA, as supported in the section B.2

e.	Additionality	Conditions to ensure that VPA meet the requirements demonstration additionality	The VPA meets the requirements of clause 1.1.3 of the Positive List mentioned within the Community Services Activity Requirements v.1.2. The proposed project falls under the automatic eligibility list of projects for proving additionality. It is mentioned in the Annex B-Positive list that project activities composed of isolated units where the users of the technology/measure are households, where each unit results in <= 600 MWh of energy savings. Evidence for inclusion: Emission reduction sheet
f.	Methodology	Condition to ensure that the real case VPA and its regular VPAs meet the applicability criteria of selected methodology of combination of methodologies	The VPA meets the eligibility criteria of the selected methodology (TPDDTEC v.4.0), as demonstrated in section B.2. Documentation: VPA-DD
g.	Principles Requirements	and Conditions to ensure that real case and its regular VPAs systematically demonstrate additionality in accordance with Principles & Requirements	The VPA meets the requirements of clause 1.1.3 of the Positive List mentioned within the Community Services Activity Requirements v.1.2. Hence, it demonstrates the additionality in accordance with Principles & Requirements. Documentation: VPA-DD

Eligibility requirements (section 2 and 3) of the Community Services Activity Requirements are demonstrated below:

Clause	Criterion	Eligibility
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2.1.1	All Community Service Activities (CSA – as defined in this document) for which Gold Standard certification is being sought shall fulfil the requirements as set out in this document and those referenced or associated.	The VPA fulfils all the set forth requirements of the “Community Services Activity Requirements”
2.1.2	All CSA Projects shall lead to climate change mitigation and/or adaptation by providing or improving access to services/resources at the household or community or institution level. Eligible services include electricity and energy, water and sanitation, waste management, housing, etc.	The proposed project falls under End-use energy efficiency type as per clause 3.1.1 (b) of GG4GG Community Services Activity Requirements, and leads to climate change mitigation by distributing Improved cook stoves to households/communities/institutions.
2.1.3	In relation to the above, all projects shall, therefore, conform to the Principles & Requirements (and associated documents)	In addition to the above, the VPA also fulfils the requirements of Principles & Requirements (v.1.2) and PoA Requirements and Procedures (v.2.1).
3.1.1	Types of project: Pre-identified CSA project types are noted below. Project Developers may submit new project types to Gold Standard for approval following the Principles & Requirements	The proposed project falls under End-use energy efficiency type as per clause 3.1.1 (b) of GG4GG Community Services Activity Requirements v.1.2
3.1.2	Project area, boundary and scale: Project Area and Boundary shall be defined in line with the applicable Impact Quantification Methodologies and Product Requirements	The project activity is large-scaled, and follows the small-scale boundary definition as per the impact quantification methodology- Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), v.4.0.
3.1.3	Certain Impact Quantification methodologies allow projects to account Suppressed Demand scenario when establishing a baseline. In such cases, the application of Suppressed Demand baseline is limited to Small Scale and Microscale Projects. Where a Suppressed Demand baseline is	In this project, the “Suppressed Demand baseline” is not applied.

	applied, it is not possible to 'stack' Gold Standard Certified Impact Statements or Products as the definition of the baseline may be contradictory.	
3.1.4	Legal ownership	The legal ownership of all the credits under this project activity lies with EKI Energy, and the same has been briefed to the end users under FPIC requirement. The same can be supported with the end user agreements.

A.1.2. Legal ownership of products generated by the VPA and legal rights to alter use of resources required to service the project

EKI Energy Services Pvt. Ltd. is the Co-ordinating/Managing Entity which communicates with the Gold Standard. EKI Energy Services Pvt. Ltd has the legal ownership of the carbon credits produced as result of the project. Since, the project activity does not account any activity that leads to the altered use of resources; therefore, acquiring any specific legal right to do so is not applicable.

A.2. Location of VPA

The VPA is implemented in the host country – Nigeria, in the states of Enugu. The latitudinal extension of Nigeria lies in between 10⁰ (14⁰N-4⁰N) while the longitudinal extent is 12⁰(15⁰E-3⁰E)¹.

Following are the targeted communities of the states in the project activity-

State	District (Local Government)	T/A (Community)
Enugu	ENUGU EAST	TRANS-EKULU MBULUOWEHE UMUCHIGBO ABAKPA I MBULUIYIUKWU

¹ <https://www.tansicollege.edu.ng/content/nigeria-location-position-and-size>

		IBAGWA-NIKE/EDEM ABAKPA II
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The map below represents the administrative outline of Nigeria, with the targeted state (Enugu) under the project activity-



A.3. Technologies and/or measures

The project activity involves deploying highly efficient biomass cook stoves with better technological design features and high-power thermal efficiency to provide a cleaner burning, increased efficiency and durability device. The improved cook stove is certified to the Standards Organization of Nigeria (SON) and designed in line with the national approach towards fuel conservation, better environment, mitigating health hazards and loss of forest cover caused by burning of wood as cooking fuel, thereby promoting forest conservation.

It is expected that the ICSs shall directly decrease wood fuel demand and reduce the pressure from wood cutting within the project boundary. The time spent foraging for wood fuel is thereby also reduced, saving time for women to engage in other economic driven activities.

Technical efficiency:

WC-200



- Secondary airflow technology to make it work efficiently.
- 42.4% (Firewood) and 58.6% (Charcoal) thermal efficiency, fuel-saving, time-saving.
- Removable ash tray for firepower management and easy cleaning.
- Stainless-steel to ensure its durability and longer lifespan.

The "Power Stove (Dual fuel- firewood and charcoal)" was fully tested by Water boiling Test (WBT) using Laboratory Emissions Monitoring System (LEMS), developed by Aprovecho Research Center.

Manufacturer Name: POWERSTOVE ENERGY

Materials

Part name	Specification
Stove top	Stainless Steel top with 6 pot supports, Dia. 26cm
Stove body	0.5mm cold-rolled steel with powder coating
Combustion chamber	Double stainless-steel wall (1mm SS304+0.5mm SS201) with secondary air in to improve durability and performance
Stove grate	Stainless-steel SS304

Insulation material	Ceramic fiber
Door frame	1mm cold-rolled sheet with powder coating.
Stove bottom	Stainless steel 304
Handle	stainless-steel handles with bakeries

Spec & Warranty

- Warranty: 2 years
- Lifespan: Conservative operational lifetime of five (5) years from the date of installation.

The CME may change for future models of ICS and the same will be transparently reflected during performance review. The details and specifications of respective cook stoves will be considered for ER calculation of project activity instance.

After end of lifetime, a report from Maintenance Company will be provided to confirm the extended life of cook stove. The project will claim credits beyond 5 years only if the end users receive a replacement or retrofit of comparable or higher quality. This will be achieved by:

- Replacing the stove with a comparable or better model, or
- Retrofitting essential components with a performance guarantee.

Projects shall complete these replacements or retrofits within the crediting period. If devices are retrofitted or repaired before or at the end of their technical life, emission reductions will continue to be claimed only if:

1. Detailed documentation is maintained for each device (parts replaced, specifications, personnel involved, and retrofit date), and
2. A manufacturer warranty or a guarantee from an experienced repair company confirms that the stove's performance (efficiency, safety, indoor emissions) remains comparable to the original.

Data collection of ICS end-user:

ICS distribution agency is responsible for stove distribution and data collection. The distribution agency will follow the SOP designed by Powerstove Energy, for stove distribution. The ICS registration process was carried out by manual recording process. The distribution team gets training that includes a brief introduction to the project

activity, the objective of the distribution of ICS as well as ICS distribution and data collection process.

The project proponent gathered the necessary information to identify households using its ICS during the course of the project. To facilitate this process, each ICS was assigned a unique serial number. This number was recorded during the registration process together with the following information (as appropriate and as available):

- Name of ICS user or head of the household
- Address/ Village name of ICS household
- Stove model Distributed
- Date of distribution/installation
- ICS serial number
- Retailer/distributor/Manufacturer information

The information collected was stored in the hard copy and/or electronic database excel sheet which serves as a project database for project monitoring and sampling purposes

A.4. Scale of the VPA

The project activity is a large-scale project as per footnote 4 of the applied methodology – TPDDTEC, version 4.0. The footnote says, “For the purpose of this methodology, the project is considered large scale activity when aggregate energy savings of the project activity exceeds 60 GWh per year or 180 GWhthermal per year in fuel input”. Total energy savings from this project is 478 GWhthermal², which exceeds the small-scale limit of 180 GWhthermal³ and hence, it is considered as a large-scale activity. (Ref: ER calculation sheet).

² Energy saving per cook stove per year
 = Energy saving in GWh thermal = saving of biomass per year in tonnes* NCV in TJ/tonne * 0.2778 GWh_{th} /TJ.

So, total energy savings of 71,199 cook stoves
 = {(2.38*0.0156*0.27778*71199*151/365) + (0.51*0.0156*0.27778*71199*214/365)}
 = 478 GWh_{th}

³ as described in the ER sheet

A.5. Funding sources of VPA

There is no public funding used for the project. To confirm this, the project developer has signed the ODA declaration form, which has been submitted to the Gold Standard as supporting documentation.

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

The Gold Standard Methodology “Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)”, Version 4.0 is applied to this project activity. Following Tool is applied for the project activity:

- Tool 33: Default values for common parameters, Version 03.0⁴.
- Community Services Activity Requirements, Version 1.2

B.2. Applicability of methodology (ies)

Following are the justifications for the applicability conditions under 2.2 of the applied methodology TPDDTEC v.4.0-

Sr. No.	Applicability Criteria	Remarks/Justification
a.	Section 2.2.1 (a): Project shall choose a technology design that has predictable performance in that it is proven to be efficient and durable under field conditions; for cookstoves, the rated thermal efficiency shall be at least 20%.	The efficiency of the ICS distributed so far under the VPA is as follows: WC-200 (wood (42.4%) and charcoal (58.6%)) as per the Stove Performance Report. Hence, this condition is met by this project. The cookstoves meet the minimum required rated thermal efficiency of at least 20%, in line with the applicable requirements.
b.	Section 2.2.1 (b): The technology shall have continuous useful energy output of less than 150kW per unit, where “continuous useful energy output” is defined above.	The project activity delivers the energy output of 4.86 KW per unit, i.e. <150 kW per unit ⁵ .

⁴ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-33-v3.pdf>

⁵ Please Refer ER sheet

c.	Section 2.2.1(c): The project activity is implemented by a project developer and can include additional project participants listed in Appendix 2 of the PDD template. The individual households and institutions may be represented collectively by community organizations, etc., but do not individually act as project participants.	This VPA is implemented by EKI Energy Services. EKI Energy Services is the CME of the PoA. The individual households do not act as project participants.
d.	Section 2.2.1(d): The project developer must design incentive mechanism(s), which should be effective as fast as possible, for the elimination of inefficient baseline stoves that are replaced by the project cooking devices and describe the incentive mechanism(s) in the PDD/VPA-DD at the time of validation.	Distributed improved cookstove under this project activity is a portable device distributed at discounted rate and is available for use as soon as the end user receives the same. Therefore, the end user will discard the use of an inefficient baseline cookstove immediately after the receipt of the ICS. Also, the beneficiaries have been provided with comprehensive trainings, highlighting the user-friendly features and other benefits of the project stoves, in order to encourage the immediate adoption of the project stoves. Apart from that, the PP is committed to provide the maintenance support for the project stoves to the end-users.
e.	Section 2.2.1 (e): To avoid double counting or double claiming, the project developer must:	1. The stove manufacturer and CME has signed the agreement that the manufacturer will not

	i. clearly communicate its ownership rights and intention of claiming the emission reductions resulting from the project activity to the following parties by contract or clear written assertions in the transaction paperwork: all other project participants; project technology manufacturers; and retailers of the project technology or the renewable fuel in use; and ii. inform and notify the end users that they cannot claim emission reductions from the project, and iii. exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace the cooking devices of another CDM or voluntary project/PoA. See data and parameters not monitored, Avoidance of double counting or double claiming with other mitigation actions, for details on this demonstration.	claim the carbon credits generated by the project activity. 2. The end user has been informed that he cannot claim the carbon credits generated by the project stove, and has signed carbon credit ownership agreement at the time of distribution of the project stove. 3. Double counting within the project with any other project activity is eliminated. Each installed Improved Cookstove (ICS) in this project has been assigned a distinct identification consisting of the customer's name, geographical location, and unique serial number. Additionally, the Project proponent has provided a signed declaration ensuring that these stoves will not be included in any other mechanism. This stringent measure prevents any possibility of double counting or double claiming with regard to other mitigation actions.
f.	Section 2.2.1 (f): Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cook stoves meeting certain conditions described in the footnote to Table 1 (e.g. switch from three-stone fire biomass stoves to LPG stoves) may	Not applicable, since the project activity does not make use of solid fossil fuel in the project scenario or other improved fossil fuel cook stoves.

	only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations.	
g.	Project activities making use of a new solid biomass feedstock in the project situation (e.g. switch to green charcoal or renewable biomass briquettes) must comply with relevant specific requirements for biomass related project activities, as defined in the latest version of the Community Services Activity Requirements. The specific requirements apply to both plantations established for the project activity and/or existing plantations that will supply biomass feedstock.	Not applicable, since this project activity does not make use of any solid biomass feedstock in the project situation.
h.	Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the project fuel/stove combination are estimated with adequate precision. Furthermore, for projects where cooking will move from outdoor to indoor or where the project technology reduces ventilation.	It is evident from the Kitchen Performance Test (KPT) results that the firewood or/and charcoal consumption by the project stove is considerably less than the baseline stove. Therefore, indoor air pollution and GHG emitted by the project activity have been reduced. Further, A Project stove test is carried out by the project developer to justify that, indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the fuel used in the project scenario. Hence, this

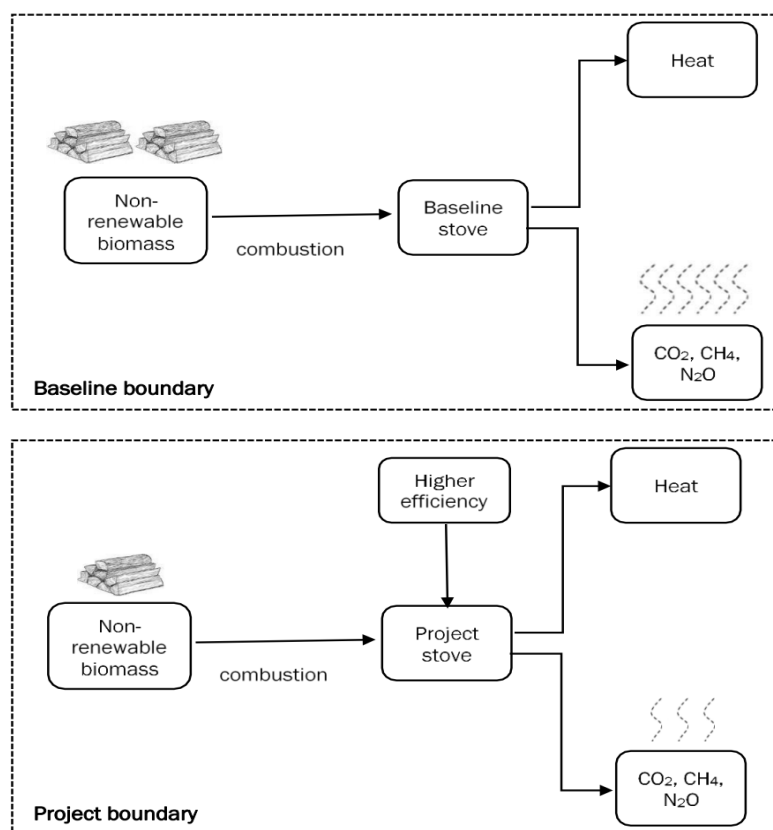
		criterion is fulfilled by this project activity.
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B.3. VPA boundary

Source	GH Gs	Includ ed?	Justification/Explanation
Baseline scenario	CO ₂	YES	Main source of emission in the baseline
	CH ₄	YES	Important source of emissions
	N ₂ O	YES	Important source of emissions
Project scenario	CO ₂	YES	Main source of emission in the baseline
	CH ₄	YES	Important source of emissions
	N ₂ O	YES	Important source of emissions

The project reduces greenhouse gases (GHGs) emitted from the use of firewood and charcoal to cook with inefficient cook stoves by introducing widespread use of an improved energy-efficient stove technology. To ensure conservative estimates of emission reductions, the project will not account for GHG reductions attributable to the production and transportation of baseline fuels.

A representation of the baseline boundary and project boundary is given below:



B.4. Establishment and description of baseline scenario

According to clause 3.4.1 of GS-TPDDTEC v.4.0, the baseline scenario of the project activity is described as the existing baseline technology/practice use and fuel consumption patterns for the type of service provided by the project technology in the population targeted for adopting the new project technology, i.e., “target population”.

Identification of baseline scenario included two methods – literature review and field/baseline survey. Literature and historical data review were done to identify the baseline cooking regime and fuel consumption pattern of the households.

Literature Review:

A report of National Bureau of Statistics, 2020⁶ states that in Nigeria, clean-cooking access has moved from a very low level of under 5% to about 10% due to new efforts to promote LPG. A total of 68.3% of all households use solid biomass for cooking in Nigeria, which comprises 43.1% three-stone fire.

⁶ <https://nigerianstat.gov.ng/download/1241101>

According to the Nigeria Living Standard Survey, 2018-19⁷; about 51.5% of people still use 3 stone/open fire cook stoves, with Enugu being a significant mention with 32.5% population still using the traditional open fire cook stoves.

While the project ICS significantly reduces greenhouse gas emissions, they simultaneously provide co- benefits to users and families in the form of relief from high fuel costs and reduced exposure to health-damaging airborne pollutants. These new kitchen regimes specifically provide some or all of the following benefits:

- Promote the efficient use of fuelwood/charcoal
- Improves the overall health of the people, by minimizing the disease risk posed due to smoke and soot produced by the traditional cookstoves.
- Promotes the efficient utilization of time, as compared to the baseline cook stove.

Baseline study:

In the absence of the proposed project activity, households within the project boundary would continue to rely on traditional cooking practices predominantly using woody biomass as the primary fuel source. Baseline study conducted across the target states (Enugu, Edo, and Kaduna) indicate that firewood remains the dominant cooking fuel in rural and peri-urban areas, with a large proportion of households utilizing highly inefficient traditional devices such as three-stone fires and iron tripod stoves. These baseline systems exhibit very low thermal efficiencies, resulting in excessive fuel consumption and high emissions of greenhouse gases (GHGs) and particulate matter.

The unsustainable harvesting of wood for cooking has been identified as a major contributor to deforestation and forest degradation within the region. Furthermore, combustion on traditional stoves leads to high levels of indoor air pollution, disproportionately affecting women and children who are primarily responsible for cooking.

No national or regional policies currently mandate a transition to improved cookstoves for domestic use, and market penetration of efficient technologies remains low. In the absence of the project, there is no systematic intervention or financial mechanism in place that would lead to an automatic uptake of high-efficiency stoves among low-income households.

The proposed project activity aims to replace these inefficient baseline systems with certified high-efficiency improved cookstoves, resulting in measurable reductions in biomass consumption and associated GHG emissions.

Baseline survey

⁷ <https://www.scribd.com/document/526170411/Nigeria-Living-Standards-Survey-2018-2019>

A baseline survey was conducted in Nigeria to provide information on the target population, baseline technology used, fuel consumption, leakage, and sustainable development indicators.

The surveys were conducted between 10/07/2025 to 15/08/2025.

Sample frame

The target end users for the project were the households of those villages where the project stove was distributed. A complete data was considered for the baseline survey to compile the sampling frame.

Sampling

The baseline survey adheres to the guidelines for determining the minimum sample size as follows:

Group Size	Minimum sample size
<300	30 or population size, whichever is smaller
300 to 1000	10% of group size
> 1000	100

Data Collection

The data collection was carried out by the survey team. All of them were familiar with the local structures and surroundings. Before collecting the data, the survey team participated in a two-day training course that included a brief introduction to the project activity, the objective of the survey was to gather guidance on how to collect the data.

Through these interviews, it was important to collect the data necessary to have a better understanding of the functioning of the households and the consumption of fuel.

The collected data was specific to the characteristics of the baseline scenario and gathered the information as per the GS's MECD Survey Questionnaire:

Findings

The main findings from the survey are that the households are homogenous within the target population of the Project area, so no cluster has to be distinguished.

No households used improved cook stoves. 100% of the households surveyed used three stone stoves with firewood/charcoal for cooking.

Average household size comes out to be 5.49.

Seasonal variations in baseline fuel consumption were observed. During the non-rainy season, households primarily used firewood for cooking, while in the rainy season, they switched to charcoal as the main fuel source.

Conclusion:

The results from this specific study site showed that the ongoing use of non-renewable wood fuel (firewood/charcoal) by the target population. This usage serves to fulfill similar thermal energy needs as those addressed by the project cook stoves in the absence of project activities.

Baseline Fuel Consumption:

The fuel consumption in the baseline scenario was determined using the average annual quantities of firewood and charcoal consumed per household, as established through a Kitchen Performance Test (KPT)⁸. The project conducted the KPT to assess the amount of fuel used by target households while operating the baseline cookstove. The procedure followed the Kitchen Performance Test guidelines specified in Annex 2 of the applicable methodology.

B.5. Demonstration of additionality

Section 3.3.1 of the applied methodology, TPDDTEC Version 4.0 provides that “The project developer must show that the project could not or would not take place without the presence of carbon finance”.

Further, the project developer shall demonstrate additionality prior to project registration by conforming to additionality requirements of one of the options below,

- a. Applicable GS4GG Activity Requirements.
- b. CDM Tool 01 - Tool for the Demonstration and Assessment of Additionality.
- c. CDM Tool 19- Demonstration of additionality of microscale project activities; (not applicable to Gold Standard microscale projects)
- d. CDM Tool 21 – Demonstration of additionality of small-scale project activities; (applicable to small-scale projects only)
- e. An approved Gold Standard VER additionality tool

Additionality here is established using paragraph 4.1.9 and para 1.1.3 of Annex B (Positive List) of Community Services Activity Requirements version 1.2.

⁸ Please refer the KPT analyzer sheet

As per GS4GG Community services activity requirements, Version 1.2, Para 4.1.9, Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of design certification:

- (a) Positive list (Annex B of this document)
- (b) Projects located in LDC, SIDS, LLDC
- (c) Microscale projects

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).

Justification:

As per Positive List - Annex B, the project meets the criteria given in 1.1.3

Project activities solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in ≤ 600 MWh of energy savings per year or ≤ 600 tonnes of emission reductions per year.

The project meets the requirements of Positive List mentioned within the CSA Requirements and hence is deemed additional.

Describe how the proposed VPA meets the criteria for deemed additionality.

The project activity leads to the emission reductions of less than 2 tCO₂e per cook stove per year. Therefore, the project meets the requirements of ≤ 600 tonnes of emission reductions per year of the Positive List mentioned within the CSA Requirements and hence is deemed additional.

B.5.1. Prior Consideration

The project was submitted to Gold Standard within one year of its commencement, thereby demonstrating adequate consideration of carbon financing for the project's commercial sustainability. Stove distribution under the project activity commenced on 27/04/2023, and the stakeholder consultation meeting was held on 07/04/2024. Consequently, the project cycle is identified as retroactive, requiring the demonstration of prior consideration. The initial submission to Gold Standard was made on 09/04/2024, when the LSC documentation was uploaded for preliminary review—within

one year from the project start date. The project is hence eligible for Gold Standard certification and the key milestones are as summarized below.

Milestone	Timelines
Start date (Distribution start date)	27/04/2023
LSC Meeting date	07/04/2024
The first submission date to GS	09/04/2024
Preliminary Review Approved	14/05/2024
Stakeholder feedback round (SFR)	03/06/2024

B.5.2. Ongoing Financial Need

Not Applicable. The project is a new project.

B.6. Sustainable Development Goals (SDG) outcomes

Refer Table 1 above after Key Project Information

B.6.1. Explanation of methodological choices/approaches for estimating the SDG Impact

Technologies employed under the VPA include improved cookstoves intended as technologies and/or practices under the methodology. The VPA applies the following methodological choices:

SDG 4: Quality Education

Applied Indicator	Equation/calculation
Indicator 4.4.1: Number of employees provided skill development training	$\text{Net benefit (SDG 4)} = \text{SDT}_{\text{Project}}$ Where: $\text{SDT}_{\text{Project}}$ = Number of soft skill trainings/program conducted in a year.

SDG 7: Affordable and Clean Energy

Applied Indicator	Equation/calculation			
Indicator or 7.3.1: Total energy savings.	Energy Saving Calculations⁹ (SDG 7)			
		Wood	Charcoal	
	Saving per cookstove per year	2.38	0.51	Tons
	NCV of non-renewable woody biomass	0.0156	0.0295	TJ/Tons

⁹ Please refer ER sheet for detailed calculations

	Energy saving in TJ per cookstove per year	0.0371	0.0152	TJ
	Total Energy Saving	1,092	632	TJ
		1,724		
		Non-Rainy season	Rainy season	
	No. of days	151	214	

SDG 8: Decent Work and Economic Growth

Applied Indicator	Equation/calculation
Indicator 8.5.1 Total number of jobs. Project-specific Indicator: Total man-hours of employment created during project implementation.	Employment records Net Benefit (SDG 8) = QEGy QEG = Quantitative Employment generation (Total number of man-hours of Employment (administrative, sales, distribution, monitoring and management) opportunities generated under Project scenario) in year y.

SDG 13: Climate Action

Applied Indicator	Equation/calculation
Indicator 13.2.1: Amount of GHGs emissions avoided or sequestered.	Net Benefit (SDG 13) = The overall GHG reductions achieved by the project activity in year y. The calculation will be done in the following manner. PD has used method 1 of the applied methodology version 4.0 because Baseline and project fuel(s) are identical and emission reductions are exclusively from improved efficiency $ER_y = \sum_{b,p} (N_{b,p,y} * U_{p,y} * SFS_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2})) * - \sum LE_{p,y}$ (equation 1 of the applied methodology) Where, ER _y = Emission reduction for total project activity in year y (tCO ₂ e/yr) Σ _{b,p} = Sum over all relevant baseline b/project p pairs N _{b,p,y} = Number of project technology-days included in the project database for baseline b/project p pair in year y (days) U _{p,y} = Cumulative Usage rate for technologies in Project scenario p in year y (fraction) = 0.9

	$SFS_{p,b,y}$ = Specific fuel savings for an individual project technology of baseline b/project p pair in year y (tonnes/technology*day) = 6.508 kg/HH/day (For wood) = 1.407 kg/HH/day (For charcoal) $NCV_{b,fuel}$ = Net calorific value of the fuel(s) that is substituted or reduced in baseline b (TJ/mass units) = 0.0156 TJ/tonne (Wood) = 0.0295 TJ/tonne (Charcoal) $f_{NRB,b,y}$ = Fractional non-renewability status of woody biomass fuel during year y (fraction) = 0.38 for Nigeria EF_{fuel,CO_2} = CO₂ emission factor from use of fuel f (tCO₂/TJ) = 112 tCO₂/TJ (Wood) = 165.22 tCO₂/TJ (Charcoal) $EF_{fuel,nonCO_2}$ = Non-CO₂ emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO₂e/TJ) = 9.46 tCO₂e/TJ (Wood) = 44.83 tCO₂e/TJ (Charcoal) $\Sigma LE_{p,y}$ = Leakage for project scenario p in year y (tCO₂e/yr) For leakage emission calculations, PD has used a default adjustment factor of 0.95 as per para 3.11.2 of the applied methodology, version 4.0. So, we can write ($-\Sigma LE_{p,y}$) = *0.95 $ER_y = \sum_{b,p} (N_{b,p,y} * U_{p,y} * SFS_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO_2} + EF_{fuel,nonCO_2})) * 0.95$ To calculate $SFS_{p,b,y}$, in line with para 4.1.15 & 4.1.18 of the applied methodology, version 4.0 the difference between the quantity of fuel that is consumed in baseline scenario b during year y in units of kg/household-day ($P_{b,y}$) and the quantity of fuel that is consumed in project scenario p during year y in units of kg/household-day ($P_{p,y}$) shall be used¹⁰. <u>Sample calculation for Year 2024 is shown below:</u> <u>ER calculations for wood fuel</u> use during the non-rainy season (November to March) for cooking purposes:
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¹⁰ Please refer KPT analyser

	Number of Project Technology-days (01-11-2024 to 31-12-2024) in Wood $= 61 \text{ (No. of days)} * 71,199 \text{ (No. of ICS)}$ $= 4,343,139$ $ER_y = \{4,343,139 * 0.9 * 6.508 * 10^{-3} * 0.0156 * (0.38 * 112 + 9.46)\} * 0.95 \text{ (for Wood)}$ $ER_y = 19,611 \text{ tCO}_2/\text{year}$ <u>ER calculations for charcoal fuel use during the rainy season (April to October) for cooking purposes:</u> Number of Project Technology-days (01-07-2024 to 31-10-2024) in charcoal $= 123 \text{ (No. of days)} * 71,199 \text{ (No. of ICS)}$ $= 8,757,477$ $ER_y = \{8,757,477 * 0.9 * 1.407 * 10^{-3} * 0.0295 * (0.38 * 164.22 + 44.83)\} * 0.95 \text{ (for Charcoal)}$ $ER_y = 33,444 \text{ tCO}_2/\text{year}$ $= ER_y \text{ (for Wood)} + ER_y \text{ (for Charcoal)}$ $= 19,611 + 33,444$ $ER_y = 53,055 \text{ tCO}_2\text{e}/\text{yr}$ The total emission reduction in the entire crediting period considering both wood and charcoal = 533,991 tCO₂e/yr The average annual ER = 106,798 tCO₂e/yr

SDG 15: Life on Land

Applied Indicator	Equation/calculation
Indicator 15.1.1: Total non-renewable wood fuel saved.	Net Benefit (SDG 15) = The overall reduction in use of non-renewable biomass in % in year y. The calculation will be done in the following manner. PD has used method 1 of the applied methodology version 4.0 because Baseline and project fuel(s) are identical and % reduction in use of non-renewable biomass is given below: $R_{nr,b,y} = [N_{b,p,y} * U_{p,y} * SFS * 10^{-3} * f_{NRB,b,y}]$ <u>Sample calculation for Year 2024 is shown below:</u> $R_{nr,b,y} = [4,343,139 * 0.9 * 6.508 * 10^{-3} * 0.38]$ $= 9,666 \text{ tonnes of non-renewable biomass (for Wood)}$

	$R_{nr,b,y} = [8,757,477 * 0.9 * 1.407 * 10^{-3} * 0.38]$ $= 4,214 \text{ tonnes of non-renewable biomass (for Charcoal)}$ Where, $R_{nr,b,y} = \text{Reduction in use of renewable biomass in year } y \text{ in units of tonnes of non-renewable biomass}$ $N_{b,p,y}$ = Number of project technology-days included in the project database for baseline b/project p pair in year y (days) <u>For wood:</u> Number of Project Technology-days (01-11-2024 to 31-12-2024) in Wood $= 61 \text{ (No. of days)} * 71,199 \text{ (No. of ICS)}$ $= 4,343,139$ <u>For Charcoal:</u> Number of Project Technology-days (01-07-2024 to 31-10-2024) in charcoal $= 123 \text{ (No. of days)} * 71,199 \text{ (No. of ICS)}$ $= 8,757,477$ $U_{p,y}$ = Cumulative usage rate for technologies in project scenario p in year y (fraction) $= 0.9$ $SFS_{p,b,y}$ = Specific fuel savings for an individual project technology of baseline b/project p pair in year y (tonnes/technology*day) $= 6.508 \text{ kg/HH/day (For wood)}$ $= 1.407 \text{ kg/HH/day (For charcoal)}$ $f_{NRB,b,y}$ = Fractional non-renewability status of woody biomass fuel during year y (fraction) $= 0.38 \text{ for Nigeria}$
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B.6.2. Data and parameters fixed ex ante

SDG 13

Data/parameter	EF_{fuel,CO2}
Unit	tCO ₂ /TJ
Description	CO ₂ emission factor arising from the use of wood fuel that is reduced

Source of data	Gold Standard Methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption", Version 4.0 ¹¹
Value(s) applied	112 (Wood) 165.22 (Charcoal; (includes charcoal production emissions))
Choice of data or Measurement methods and procedures	The default value for wood/wood waste is applied
Purpose of data	Calculation of baseline and project emissions
Additional comment	-

Data/parameter	NCV_{b,fuel}
Unit	TJ/ton
Description	Net calorific value of the fuel (wood and charcoal) used in the baseline scenario.
Source of data	Gold Standard Methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption", Version 4.0
Value(s) applied	0.0156 TJ/tonne (Wood) 0.0295 TJ/tonne (Charcoal)
Choice of data or Measurement methods and procedures	Not applicable
Purpose of data	Calculation of emission reduction
Additional comment	The methodology default emission factor has been applied.

Data/parameter	EF_{fuel,non-CO2}
Unit	tCO ₂ e/TJ
Description	Non-CO ₂ emission factor arising from the use of fuel f, when the baseline fuel f is biomass or charcoal (tCO ₂ e/TJ)

¹¹ <https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentralized-thermal-energy-tpddtec-consumption/>

Source of data	Gold Standard Methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption", version 4.0
Value(s) applied	9.46 tCO ₂ e/TJ (Wood) 44.83 tCO ₂ e/TJ (Charcoal; includes charcoal production emissions)
Choice of data or Measurement methods and procedures	The default value for wood/wood waste is applied
Purpose of data	Calculation of baseline and project emissions
Additional comment	-

Data/parameter	$f_{NRB,b,y}$
Unit	Fraction
Description	Fractional non-renewability status of woody biomass fuel during year y
Source of data	Tool 33- Default values for common parameters, Version 03 ¹²
Value(s) applied	0.38 for Nigeria
Choice of data or Measurement methods and procedures	Default value considered from Tool 33- Default values for common parameters
Purpose of data	Calculation of baseline and project emissions
Additional comment	-

B.6.3. Ex ante estimation of SDG Impact

Sustainable Development Goals Targeted	SDG Impact Indicator	Calculation	Ex-ante Estimate
4 Quality Education	Indicator 4.4.1: Number of employees provided skill development training	$SDT_{Project}$	10

¹² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-33-v3.pdf>

7 Affordable and Clean Energy	Indicator 7.3.1: Total energy savings.	Net Benefit = energy savings.	1,724 TJ
8 Decent Work and Economic Growth	Indicator 8.5.1 Total number of jobs. Project-specific Indicator: Total man-hours of employment created during project implementation.	Net Benefit (SDG 8) = QEGy	15,000 man-hours (Estimated)
13 Climate Action	Indicator 13.2.1: Amount of GHGs emissions avoided or sequestered.	Refer table below	106,798 tCO ₂ e/yr
15 Life on Land	Indicator 15.1.1: Total non-renewable wood fuel saved.	$R_{nr,b,y} = [N_{b,p,y} * U_{p,y} * SFS * 10^{-3} * f_{NRB,b,y}]$	31,290 tonnes

B.6.4. Summary of ex ante estimates of each SDG outcome

SDG 4: Quality Education

Item	Baseline estimate	Project estimate	Net benefit
SDG- 4	0	10	10

SDG 7: Affordable and Clean Energy

Item	Baseline estimate	Project estimate	Net benefit
SDG- 7	0	1,724 TJ	1,724 TJ

SDG 8: Decent Work and Economic Growth

Item	Baseline estimate	Project estimate	Net benefit
SDG- 8	0	15,000 man-hours	15,000 man-hours

SDG 13: Climate Action

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 2024 (01/07/2024 to 31/12/2024)	53,055	0	53,055
Year 2025 (01/01/2025 to 31/12/2025)	106,734	0	106,734
Year 2026 (01/01/2026 to 31/12/2026)	106,734	0	106,734
Year 2027 (01/01/2027 to 31/12/2027)	106,734	0	106,734
Year 2028 (01/01/2028 to 31/12/2028)	107,056	0	107,056
Year 2029 (01/01/2029 to 30/06/2029)	53,678	0	53,678

Total	533,991	0	533,991
Total number of crediting years	5		
Annual average over the crediting period	106,798		

SDG 15: Life on Land

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 2024 (01/07/2024 to 31/12/2024)	13,880	0	13,880
Year 2025 (01/01/2025 to 31/12/2025)	31,259	0	31,259
Year 2026 (01/01/2026 to 31/12/2026)	31,259	0	31,259
Year 2027 (01/01/2027 to 31/12/2027)	31,259	0	31,259
Year 2028 (01/01/2028 to 31/12/2028)	31,418	0	31,418
Year 2029 (01/01/2029 to 30/06/2029)	17,379	0	17,379
Total	156,454	0	156,454
Total number of crediting years	5		
Annual average over the crediting period	31,290		

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

SDG 4

Data / Parameter	SDT _y
Unit	Number
Description	Number of employees who have undergone skill development training
Source of data	training records
Value(s) applied	10

Measurement methods and procedures	The measurement of the parameter will be based on the Providing proper training on the use of ICS and running awareness programs on environmental protection can help to promote gender equality, improve ICS adoption rates, and protect the environment, thereby contributing to sustainable development goals.
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	SDG-4 contribution
Additional comment	-

SDG 8

Data / Parameter	QEG _y
Unit	man-hours
Description	Quantitative Employment generation (Total number of man-hours of Employment (administrative, sales, distribution, monitoring and management) opportunities generated under Project scenario) in year y
Source of data	Declaration of distributor and HR records
Value(s) applied	5,000 (ex-ante estimation)
Measurement methods and procedures	Not applicable
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	For SDG-8 contribution
Additional comment	-

SDG 7, 13, 15

Data / Parameter	N_{b,p,y}		
Unit	Number		
Description	Number of project technology days included in the project database for baseline b/project p pair in year y		
Source of data	Number of days in calendar year y Number of ICS distributed in year y from the ICS distribution record.		
Value(s) applied	Year	Wood	Charcoal
	2024	4,343,139	8,757,477

	<table><tr><td>2025</td><td>10,751,049</td><td>15,236,586</td></tr><tr><td>2026</td><td>10,751,049</td><td>15,236,586</td></tr><tr><td>2027</td><td>10,751,049</td><td>15,236,586</td></tr><tr><td>2028</td><td>10,822,248</td><td>15,236,586</td></tr><tr><td>2029</td><td>6,407,910</td><td>6,479,109</td></tr></table>	2025	10,751,049	15,236,586	2026	10,751,049	15,236,586	2027	10,751,049	15,236,586	2028	10,822,248	15,236,586	2029	6,407,910	6,479,109
2025	10,751,049	15,236,586														
2026	10,751,049	15,236,586														
2027	10,751,049	15,236,586														
2028	10,822,248	15,236,586														
2029	6,407,910	6,479,109														
Measurement methods and procedures	Calculated from the Project as the sum of the number of ICS distributed times the calendar days during the year y that they were present at the end-user locations. For project calculations: • Wood fuel usage was considered during non-rainy days (dry season). • Charcoal fuel usage was considered during rainy days (wet season). <table><tr><td></td><td>Rainy season</td><td>Non-Rainy season</td></tr><tr><td>No. of days¹³</td><td>151</td><td>214</td></tr></table> The number of rainy (151 days) and non-rainy days (214 days) was derived from Nigeria’s seasonal climate pattern, where the rainy season typically occurs from April to October and the dry season from November to March.		Rainy season	Non-Rainy season	No. of days ¹³	151	214									
	Rainy season	Non-Rainy season														
No. of days ¹³	151	214														
Monitoring frequency	Calculated at least once in a year.															
QA/QC procedures	The results of the usage survey will be cross-checked with the contents of the project database to confirm whether the project technology units surveyed are present at end-user locations as expected, or not. If there is a discrepancy, this shall be explained or corrected.															
Purpose of data	To calculate the SDG 15, SDG 7 contribution, as well as emission reduction (SDG 13).															
Additional comment	-															

¹³ [The Climate in Nigeria](#)

Data / Parameter	$U_{p,y}$
Unit	Percentage
Description	Weighted average usage rate in project scenario p during year y.
Source of data	Annual usage survey
Value(s) applied	90%
Measurement methods and procedures	The measurement of the parameter will be based on qualitative information collected during monitoring surveys. The end users will be asked whether the project stove is operational. The result will be extrapolated on all stove users for this project. PP will follow the "requirement and guidelines of usage rate monitoring" for the estimation of the usage rate of the implemented cook stoves. In line with section 2.3 "Best Practice" level, monitoring requirements will be planned but at least the "Good Practice" requirement will be done during the actual monitoring.
Monitoring frequency	Annual
QA/QC procedures	The surveyor will check the operating condition of the project cook stove visually during the survey.
Purpose of data	Project emission calculations
Additional comment	Usage Survey shall be conducted in accordance with the "Requirements and Guidelines Usage Rate Monitoring, Ver. 2.0, Publication date 27/10/2020" ¹⁴

Data / Parameter	$P_{b,y}$
Unit	kg/household-day
Description	Quantity of fuel that is consumed in baseline scenario b during y year
Source of data	Baseline KPT Test Results

¹⁴ <https://globalgoals.goldstandard.org/407g-ee-ics-tpddtec-usage-guidelines/>

Value(s) applied	8.94 for Wood 2.47 for Charcoal
Measurement methods and procedures	Following the methodology “Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0”, $P_{b,y}$ is determined using the KPT protocol, included in Annex 4 of the methodology, performed biennially by the PP Quality, control, and Monitoring Manager on a representative sample of stove users taken from the Project database. The sample size was selected so that the use of the point estimator of the mean is justified because the data complies with the 90/30 rule. <u>Calibration procedures for equipment:</u> To measure the weight of fuel consumed by the baseline stove during baseline KPT, weighing scales were used. The weighing scales used for baseline purposes were calibrated before starting the survey, as per the national/international standard, or as specified in the user manual of the respective weighing scale. • Details of weighing scales is given below: • Serial No.: 217129166001028292, 217129166001028293, 217129166001028294, and 217129166001028295 • Accuray Class: 5g (0-10kg) & 10g (10-45kg) • Date of calibration: 26-August-2024 Details of moisture meter is given below: • Serial No.: 217429166001028292 • Accuracy: $\pm 0.5\%$ • The digital moisture meter used is auto-calibrated. The parameter value is derived from in situ Kitchen Performance Tests (KPTs) conducted for 87 households sampled from project activity. The baseline KPT campaign was undertaken September-2025 by locally engaged field staff who received specialized training. All measurements followed the procedures, quality control requirements, and data handling provisions of the protocol. Comprehensive analysis of the KPT data is provided in the accompanying Excel file. The observed standard deviation for wood and charcoal was 0.2 and 0.1, with a resulting precision of 2% and 3% respectively. These results demonstrate compliance with the methodology’s 90/30 confidence precision requirement and justify the use of the measured parameter value for baseline estimation.

Monitoring frequency	At the start of the crediting period. Fixed for one crediting period.
QA/QC procedures	Trained field Officers of PP were carried out the data collection. KPT will be supervised and checked by PP's Quality Control, and Monitoring Manager. The sample size of stove users shall be chosen for a 90/30 precision (90% confidence interval+ and 30% margin of error). In cases where the result indicates that 90/30 precision is not achieved, the lower limit of a 30% confidence interval of the parameter value will be chosen as an alternative to repeating the survey efforts to achieve the 90/30 precision.
Purpose of data	To calculate the emission reduction (SDG 13).
Additional comment	There is only one baseline cooking practice namely cooking on an open fire

Data / Parameter	$P_{p,y}$
Unit	kg/household-day
Description	Quantity of fuel that is consumed in project scenario p during year y
Source of data	1st project KPT Test Results
Value(s) applied	2.49 for Wood 1.06 for Charcoal
Measurement methods and procedures	Following the methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0", P_p, is determined using the KPT protocol, included in Annex 4 of the methodology, performed biennially by the PP's Quality, control, and Monitoring Manager on a representative sample of stove users taken from the Project database. The sample size will be selected so that the use of the point estimator of the mean is justified because the data complies with the 90/30 rule.
Monitoring frequency	Updated every two years, or more frequently.
QA/QC procedures	Trained field Officers of PP will carry out the data collection. KPT will be supervised and checked by PP's Quality Control, and Monitoring Manager. The sample size of stove users shall be chosen for a 90/30 precision (90% confidence interval+ and 30% margin of error). In cases where the result indicates that 90/30 precision is not achieved, the lower limit of a 30% confidence interval of

	the parameter value will be chosen as an alternative to repeating the survey efforts to achieve the 90/30 precision.
Purpose of data	Emission calculations
Additional comment	There is only one project cooking practice namely cooking on an improved cook stove.

Data / Parameter	$LE_{p,y}$
Unit	fraction
Description	Leakage in project scenario p during year y
Source of data	As per methodology- Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)
Value(s) applied	0.95 (default value)
Measurement methods and procedures	Not applicable as the default value of 0.95 will be applied for the calculation.
Monitoring frequency	Not applicable as the default value of 0.95 will be applied for the calculation.
QA/QC procedures	Not applicable as the default value of 0.95 will be applied for the calculation.
Purpose of data	Calculation of emission reduction
Additional comment	-

Data / Parameter	Presence of stove stacking
Unit	NA
Description	Descriptive statistics of the presence and usage practices of baseline- and other non-project-technology by project technology end users
Source of data	Ist Usage Survey (conducted from 11/07/2025 to 18/07/2025)
Value(s) applied	0%
Measurement methods and procedures	NA
Monitoring frequency	Annual

QA/QC procedures	The calculation of $SFS_{p,b,y}$ has been cross-checked with the observed presence of stove stacking during the usage survey, to ensure any stove stacking is considered so that emission reductions are calculated only from real reduction of baseline fuel use. During the latest usage survey (that took place from 11/07/2025 to 18/07/2025), it was found that the end users were not using their traditional or any other cook stoves, apart from the project stoves provided to them by the project developer. Since, no case of using cook stoves by the end users, other than the project stove itself was found during the usage survey¹⁵, hence 0% of stove stacking has been accounted
Purpose of data	Usage of baseline stove
Additional comment	NA

B.7.2. Sampling plan

For measurement/ monitoring of five parameters based on a representative sample. As demonstrated below under "Sample Size", the simplified approach proposed in KPT version 4.0, 2018 ¹⁶ of the Kitchen Performance Test will be used for determining the minimum sample size.

Monitored Parameters:

The project involves the introduction of an improved cook stove as energy efficiency measures:

No.	Monitoring Parameters	Sampling Parameters	Parameter type	Monitoring frequency
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¹⁵ The corresponding results could be traced from the "Household Information" cell in the provided Usage Survey Sheet.

¹⁶ <https://cleancooking.org/binary-data/DOCUMENT/file/000/000/604-1.pdf>

1	SPM_y		% number of households reporting a reduction in smoke after shifting to ICS in year y	Proportion	Updated every year, or more frequently
2	TS_y		% number of households reporting time-saving in fuel collection/cooking after shifting to ICS in year y	Total value	Updated every year, or more frequently
3	$U_{p,y}$		Weighted average usage rate in project scenario p during year y.	Weighted average	Updated every year, or more frequently
4	$SFS_{p,b,y}$	$P_{b,y}$	Quantity of fuel that is consumed in baseline scenario b during y year	Mean value	At the start of the crediting period. Fixed for one crediting period.
		$P_{p,y}$	Quantity of fuel that is consumed in project scenario p during year y	Mean value	Updated every two years, or more frequently.

Target Population:

The target population will be the complete set of appliances (ICS) deployed under the project.

Sampling Method:

In the project, traditional cooking appliances will be replaced with ICS distribution throughout the project area. The population is scattered around the nation and is homogeneous in nature, using common technologies with similar operational characteristics. Since the characteristics of the population (for example type of biomass consumed) are more similar. Therefore, the samples will be calculated using a simple

random sampling technique. Samples will be drawn by using the random number generator.

To determine the parameters, sampling will involve the following approaches (outcome in brackets):

- SPM_y** Interview with the end user to determine the reduction in smoke in the year after switching to ICS (Yes/No)
- TS_y** Interview with the end user to determine the total time-saving in fuel collection/cooking after shifting to ICS in the year (Yes/No)
- U_{p,y}** Visual inspection of the premises to see if ICS is operational and in use. Interview with the end user if required to verify that ICS is still in use (Yes/No)
- SFS_{p,b,y} (P_{b,y})** Interview with the end user and estimate the daily consumption of woody biomass of traditional stove/ Three stone stove (Daily consumption of woody biomass)
- SFS_{p,b,y} (P_{p,y})** Interview with the end user and estimate the daily consumption of woody biomass of ICS (Daily consumption of woody biomass)

Data collection and management methods:

The methods for Distribution, Monitoring, and reporting data and parameters are described below.

Each distributed ICS is equipped with a label stating the unique serial number which is used for references and monitoring. The unique serial numbers provide the basis for monitoring activities and prevent instances of double counting.

The ICS is transported by the distributing entity around the Project site. Users receive the ICS through distributing entities. The ICS data management and collection procedure uses a safe, data storage system via ICT i.e., using the mobile app or manually.

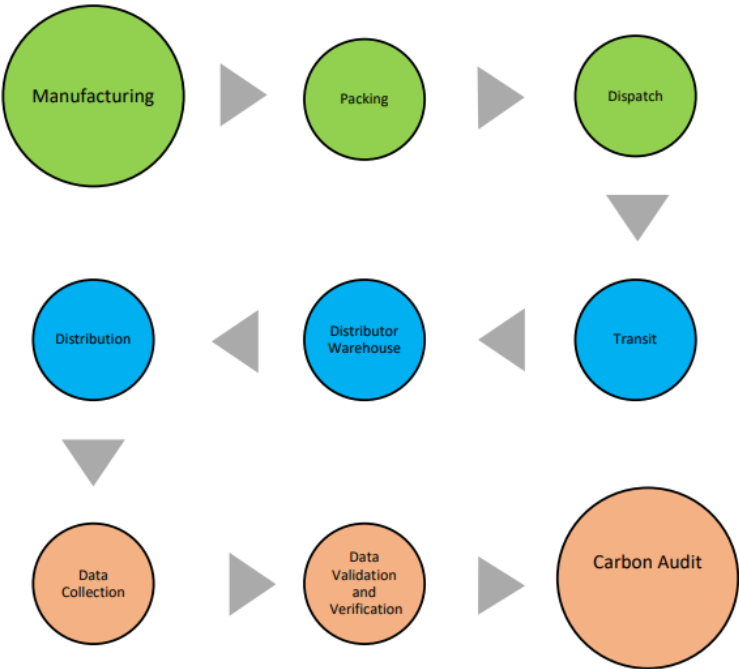
Following is the tabular representation of the responsible entity (ies) for the data collection and analysis-

Data Type	Frequency	Parameters Monitored	Responsible Entity (ies)
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Baseline Survey Data and analysis	Once; within the first year of the crediting period.	Baseline Scenario	Distribution Unit, alongside the representatives of PD (EKIESL) would conduct the baseline survey, while the analysis would be done by EKIESL.
Kitchen Performance Test (KPT) Survey Data and Analysis	Biennial	$P_{b,y}$ and $P_{p,y}$	Distribution Unit, alongside the representatives of PD (EKIESL) would conduct the KPT, while its analysis would be done by the EKIESL.
Usage Survey and Analysis.	Calculated at least once in a year	$U_{p,y}$, SPM_y , TS_y , $N_{b,p,y}$	Distribution Unit would be responsible for conducting the usage survey. The analysis would be done by EKIESL.
Employee Training Data	Twice in an year	SDT_y	Distribution Unit, alongside the representatives of PD (EKIESL) would be responsible to collect the training data provided to the employees of the distribution unit.
Total created Man-Hour Data	Calculated at least once in a year	QEG_y	Distribution Unit and Manufacturing Unit would be responsible to collect the total created man-hours of employment. EKIESL would be responsible for consolidating the data received from the

			manufacturing and distribution unit.
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The ICS flow is described in the following figure:



Kitchen Performance Test KPT Survey

Objective: The objective of KPT is to measure the fuel wood consumed by the baseline stove ($P_{b,y}$) and the project stove ($P_{p,y}$) within the project boundary for calculation of the parameter $SFS_{p,b,y}$.

Sample frame: The sample frame for the monitoring survey consists of all households on the project database.

Sample size:

According to KPT Protocol version 4.0¹⁷ –

The Kitchen Performance Test (KPT) is the principal field-based procedure to measure household fuel consumption. The primary objective of the KPT is to quantify fuel consumption under typical household and stove usage conditions. The materials in KPT protocol version 4.0 provide guidance on the minimum set of procedures needed to

¹⁷ <https://cleancookingalliance.org/binary-data/DOCUMENT/file/000/000/604-1.pdf>

meet the primary aim of the KPT, a quantitative measure of fuel consumption. KPTs are often combined with household surveys, which help to contextualize fuel consumption practices.

Sample size is also an important consideration because samples should be large enough to ensure statistically valid results. Gold Standard recommends the following sizes based on the overall size of the target population (The Gold Standard Foundation, 2011):

- Group size < 300: either 30 or population size, whichever is smaller
- Group size 300 to 1000: 10% of group size
- Group size > 1000: at least 100

Provide at least 20 – 30% more sample points to account for any unavailability/no consent”.

- According to GS methodology “TPDDTEC” –

A paired sample, an independent sample, or a single sample may be used as the sample size.

Paired Samples – Paired sampling is a statistical technique used in research to compare two related samples that have been matched or paired based on specific criteria. By matching observations with similar characteristics or measurements, paired sampling aims to reduce the influence of confounding variables and increase the precision of the comparison. This approach is particularly useful in before-and-after studies or when evaluating the effects of interventions on the same group, as it helps control for individual differences and external factors, thereby enhancing the validity and reliability of the study results.

Households sampled in the baseline and the project situations are the same.

COV	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
90/30 precision	45	53	61	70	80	90	101	112	124

Independent Samples – Independent sample selection is a method in research where separate sets of kitchens or households are chosen for the BEFORE and AFTER phases. Each set represents a distinct group with similar socio-economic and cultural conditions. This approach allows for testing the baseline and project scenarios independently. It requires larger sample sizes but provides a reliable comparison when concurrent testing or a fixed baseline is necessary. By selecting independent samples, the study can assess

the impact of the improved stoves in different contexts, ensuring the validity and generalizability of the results.

Households sampled in the project situation are different from households sampled in the baseline situation.

COV	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
90/30 precision	90	105	122	140	159	184	201	224	248

Single Samples – Single sample testing refers to a methodology in which the performance of a project stove is evaluated without measuring fuel consumption in the baseline phase. This approach is employed when default efficiency values are used for the baseline stoves. The single sample KPT test calculates the fuel saved by combining results from the project stove with either the project stove's efficiency value or credible estimates of delivered cooking energy or average baseline fuel consumption. By focusing solely on the project stove, this method provides a reliable and conservative assessment of its performance, taking into account usage patterns and energy efficiency.

Sample sizes in cases of SINGLE samples (where the tests are conducted for either baseline or project scenario but not both).

COV	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
90/30 precision	12	26	45	70	101	137	179	226	279

The KPT protocol version 4.0 states that the sample size for a group larger than 1000 should be at least 100. Additionally, in accordance with the GS approach, the "TPDDTEC" sample size depends on the COV (Coefficient of Variation), and proposed that "as a good starting point is to choose a mid-way value in the range given in the tables". In this case, the GS methodology's option to select a "single sample" is not applicable for the current project activity because KPT for traditional stoves was not conducted at the time of the baseline survey. Therefore, either paired samples or independent sample selection methods will be applied for the current project activity, and it will be conducted within the first year of ISC distribution. However, as the sample size is greater than 1000, the KPT protocol version 4.0 will continue in order to reach the target of 100 KPT households.

In all of the cases, the sample size should be 20% larger than the KPT-conducted households to consider "sample size attrition". In line with the above criteria, Project Proponent will choose the minimum 100 samples for KPT for each type of fuel type i.e.,

Wood and Charcoal respectively, which calls for pairing up samples from at least 125 households for each fuel type i.e. Wood and Charcoal respectively. CME opt for independent sample for the Baseline and project KPT.

A total sample have been selected on a random basis from the project database using an online random number generator application. And baseline for the selection of baseline stoves, Powerstove Energy will select a similar household in the same geographic location (preferably in the same village) that is using only the baseline stove. A sample shall be select on a random basis.

Oversampling is strongly encouraged, not only to compensate for any attrition, outliers, or non-response associated with the sample, but also to prevent a situation at the analysis stage where the required reliability is not achieved, and additional sampling efforts would be required. The sample size shown above will be adjusted upwards to account for non-responses, Project proponent shall determine the appropriate non-responses rate based on previous experience.

$SFS_{p,b,y}$ ($P_{b,y}$ & $P_{p,y}$):

This survey involves interviews with the end user and estimating the daily consumption of woody biomass on three stone stove/ Traditional stove/ baseline stove. The staff will visit the site and ask each household about their daily consumption of wood and charcoal respectively for the baseline stove and conduct the KPT for continuous three days as described below:

On the first day, a bundle of wood stoke/ charcoal will be obtained from the household inventory or provided by the PP, according on what is appropriate, and will then be weighed using a weighing scale and with the accurate moisture test of the provided wood. Next day, the weight of remaining wood will be measured and another stock on pre-measured wood will be provided to the survey household. The same process will be repeated till the consecutive three days.

The surveys hard copies and soft copies will be kept until the project receives credit. Whichever is an everlasting backup, both can be used. A backup of the survey results will also be stored on an electric medium. All data monitored and required for verification and issuance will be kept for two years after the end of the crediting period or the last issuance of credits for the project activity, whichever is later.

Survey results:

Sample drawn	Sample conducted
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Fuel	Wood	Charcoal	Wood	Charcoal
Baseline KPT	125	125	125	122
Project KPT	125	125	125	125

CME conducted KPT on stoves for measurement of wood consumption in project stoves ($P_{p,y}$) and on baseline stoves for measurement of wood consumption in baseline stoves ($P_{b,y}$) for wood and charcoal respectively and calculated a mean value of $P_{p,y}$ kg/capita/day and $P_{b,y}$ kg/ capita/day & average family size per hh is monitored; resulting the value of parameter $SFS_{p,b,y}$ kg/ capita/day. The precision achieved by the conducted survey that is within the range of 90/30 precision range, hence acceptable.

Below are the result and analysis for $SFS_{p,b,y}$ ($P_{b,y}$ & $P_{p,y}$):

1. For Wood

90/30 assessment			
		Baseline fuel consumption	Project fuel consumption
Sample Mean		1.9	0.5
Sample Size (valid count)		125.0	123.0
Standard Deviation		0.2	0.1
			Fuel saving
Standard error			0.02
What is the precision attained?			2%
Does the result satisfy the 90/30 rule?			YES
Fuel saving			

2. For charcoal

90/30 assessment			
		Baseline fuel consumption	Project fuel consumption
Sample Mean		0.55	0.2
Sample Size (valid count)		118.0	113.0
Standard Deviation		0.1	0.0
			Fuel saving
Standard error			0.01
What is the precision attained?			3%
Does the result satisfy the 90/30 rule?			YES
Fuel saving Use mean value			
Mean value	kg/per capita/day		0.31
Family size	4.49	Result (SFS _{p,b,y})	0.51 ton/hh/year

Quality control: The CME will consider the non-response and the possible removal of outliers from the sample, as part of a Quality Control/Quality Assurance system. The choice of measure applied to each parameter will depend on the cost of each data collection approach and the logistics required. The project proponent will determine the most effective measure for each parameter from the following list:

- Oversampling: Randomly draw a sample more than the calculated number (say 20%) and collect data for each parameter
- Buffer Group: Randomly draw additional samples (say 20%) and collect data from only minimum numbers of ICS as per sample size calculation. If this would not result in the required sample size data would be collected from the additional ICS that were selected in the sample.

The sampling plan has the following procedures in place to ensure good-quality data. The project proponent will ensure that field personnel have reviewed, understand, and agreed to follow the monitoring plan procedures, including provisions for maximizing

response rates and documenting out-of-population cases, refusals, and other sources of non-response. A quality control and assurance strategy will be documented. Quality control and assurance strategies include addressing non-sampling errors, such as non-response or bias from the interviewer. The project proponent or a competent third party designated by the project proponent with the proper skills will train the monitoring personnel on how to properly survey households to prevent bias from the interviewer. In the case a household refuses to participate, another household will be chosen at random. To reduce interviewer bias, a good questionnaire design and well-tested questionnaires will be used. The surveyor at the site will get training from EKI for the monitoring survey & KPT, which includes interviewing the beneficiaries and weighing the wood to use with weighing equipment. Additionally, give weighing machine calibration instructions.

The sample data for the mean value parameter is continuous and therefore the presence of outliers is possible. To identify and address outliers for the parameter, outliers will be defined as those data points with values greater than three standard deviations from the mean of the sample. Data points identified as outliers will be omitted from the analysis.

Management: Powerstove Energy¹⁸ is responsible for accurate and transparent record-keeping, monitoring, and evaluation. All supporting documentation and records for the project will be easily accessible for spot-checking and cross-referencing by a third party.

Operational arrangements: The Quality, Control, and Monitoring Manager together with the Operations Manager are responsible for planning and managing the survey. Roles were divided amongst field officers and project staff at every stage and the Quality, Control, and Monitoring Manager was the overall coordinator ensuring completion and quality at every stage.

Stove Usage and other SDG parameters Survey (annual structured household interviews)

¹⁸ Here Power stove is the implementation partner.

Objective: The stove usage and other SDG parameters survey is used to determine the usage rate ($U_{p,y}$) and other SDG parameters.

Sample frame: The sample frame for the stove usage and other SDG parameters survey is all stoves that have been distributed as recorded in the distribution record and on the project database.

Sample procedure: A simple random sampling procedure was adopted for the stove usage survey.

Sample size: CME has considered different samples for usage surveys for the parameters SPM_y , TS_y , and $U_{p,y}$. CME may also consider the same samples for KPT on project stoves and for the stove usage survey because the target population is the exactly same. Sampling more than one parameter within the same sample (household) helps in reducing the travel needs for monitoring and the associated costs.

Also, the usage survey would incorporate the monitoring of "stove stacking". If a case of stove stacking is found during the usage survey; the appropriate measures would be taken and the corresponding emission reductions would be deducted from the annual emission reductions.

The following equation for the sample size will be used to calculate minimum sample size when applying simple random sampling (As provided in the Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities', Version 04.0):

Sample size determination for proportion parameter

The equation for a 90/10 confidence/precision to give the required sample size is:

$$n \geq \frac{1.645^2 N \times p(1 - p)}{(N - 1) \times 0.1^2 \times p^2 + 1.645^2 \times p(1 - p)}$$

Where:

- n = Sample size for households
- N = Total number of households
- p = Expected proportion of parameter of interest
- 1.645 = Represents the 90% confidence required
- 0.1 = Represents the 10% relative precision

Minimum calculated sample size is given below:

Sample Size Determination for a Proportion Parameter	confidence/precision criterion
Survey design: Simple random sampling	90/10

Calculation method: Precision via confidence interval	
Parameter	Nigeria
N (Total number of households)	71,199
p (Expected proportion of parameter of interest)	0.8
1.645 (Represents the 90% confidence required)	1.645
0.1 (Represents the 10% relative precision)	0.1
n (Min Sample Size)	68

Quality control: The CME will consider the non-response and the possible removal of outliers from the sample, as part of a Quality Control/Quality Assurance system. The choice of measure applied to each parameter will depend on the cost of each data collection approach and the logistics required. The project proponent will determine the most effective measure for each parameter from the following list:

- Oversampling: Randomly draw a sample more than the calculated number (say 20%) and collect data for each parameter
- Buffer Group: Randomly draw additional samples (say 20%) and collect data from only minimum numbers of ICS as per sample size calculation. If this would not result in the required sample size data would be collected from the additional ICS that were selected in the sample.

Survey results: Survey results for all the parameters are as below:

	Sample drawn		Sample conducted	
Fuel	Wood	Charcoal	Wood	Charcoal
Baseline survey	125		101	
Usage Survey	85		87	

Sustainable Development Goals Targeted	SDG Impact Indicator	Survey result
4 Quality Education	Indicator 4.4.1: Number of employees provided skill development training	10
8 Decent Work and Economic Growth	Indicator 8.5.1 Total number of jobs. Project-specific Indicator: Total man-hours of employment created during project implementation.	15,000 man-hours (Estimated)

B.7.3. Other elements of monitoring plan

i. **Assessment for Leakage**

The GS methodology provides a net-to-gross adjustment factor of 0.95 to account for leakages, hence the surveys are not required to determine leakage.

The other source of leakage occurs if equipment currently being utilized is transferred from outside the boundary to the project activity. All ICSs in the project are newly manufactured/assembled or newly installed, thus no leakage is applicable.

ii. **Monitoring Reporting**

The project proponent will assess all monitoring data and produce a monitoring record for the DOE to verify the corresponding to the preceding monitoring period. This record will present the data relating to the survey results conducted for the respective monitoring period.

The purpose of the monitoring plan will be to ensure successful monitoring of the emission reductions of the proposed project during its crediting period. The overall monitoring will be managed by the project implementer.

Activities and performance related to emissions reduction will be monitored by CME. The PD proposed the following roles and responsibilities for data monitoring, collection, data archiving, and calibration of equipment for these project activity instances. The team comprises will follow the below participators.

The monitoring activities will involve data collection during distribution as well as usage information post-distribution. The data collected during distribution will also involve information about the stove, the end user, and the location to enable one to uniquely identify each ICS unit and avoid double counting.

iii. **Maintenance and Repair System -**

Powerstove has a robust maintenance and repair system for her clean cookstove project that is crucial for ensuring long-term functionality and user satisfaction following the below processes:

1. **Technical Support Network:** Powerstove established a network of trained technicians and local experts who provides maintenance and repair services for Powerstove clean cookstoves at community level.

2. User Education: Powerstove offer training programs to project partners' NGOs on proper operation, maintenance, and minor repairs of the Powerstove clean cookstoves to extend their lifespan and efficiency.
3. Supply Chain Management: Powerstove developed a streamlined supply chain for replacement parts, ensuring they are readily available for maintenance and repairs.
4. Troubleshooting Guidelines: Provide users with easy-to-understand troubleshooting guidelines to help them address common issues without the need for immediate technician intervention.
5. Responsive Communication Channels: Powerstove set up accessible communication channels (such as hotlines, online platforms, or local service centers) for users to report warranty issues and request maintenance or repair services.
6. Scheduled Maintenance: Powerstove implemented a Management Information System for scheduled maintenance visits to proactively address potential issues and ensure optimal performance of the clean cookstoves.
7. Quality Assurance: Powerstove regularly inspect and assess the performance of clean cookstoves to identify any systemic issues or areas for improvement.
8. Data Collection and Analysis: Powerstove collect and analyze data on maintenance and repair requests to identify recurring issues, inform product improvements, and optimize the maintenance process.
9. Feedback Mechanism: Powerstove established a feedback loop where users can provide input on the maintenance and repair process, helping to improve service quality and user experience.
10. Continuous Training: Finally, Powerstove provide ongoing training for maintenance technicians to keep them updated on the latest repair techniques and product developments.

After lifetime, a report from the manufacturer/maintenance agency will be provided to confirm the extended life of the cook stove. The project will claim credits beyond ICS lifetime only for a balanced year till the cook stove is replaced by new cook stoves.

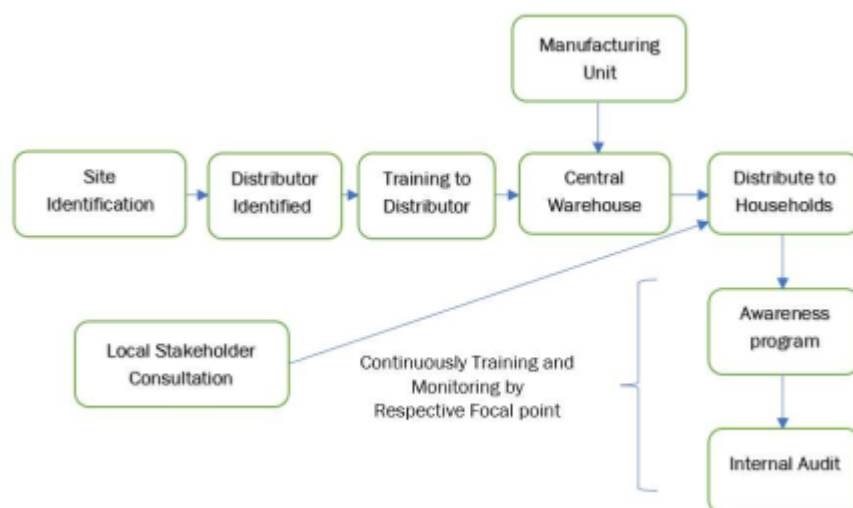
Powerstove by implementing this comprehensive maintenance and repair system has the goal to ensure that her clean cookstoves remain functional, safe, and efficient, ultimately enhancing user satisfaction and the long-term success of the project.

The roles and responsibilities of different participators will be proposed to be as follows:

Entity/Person	Roles & Responsibilities
CME and its representative	✓ GS documentation development ✓ Communicate with GS ✓ Communicate with DOE for validation & verification ✓ Identify local partners for local representation and support ✓ Identity suitable ICS manufacturers ✓ Design the distribution plan for on-ground implementation of ICS ✓ Design the monitoring system (including data collection in an electronic database) ✓ Training and development of local resources (as may be required) ✓ Regular Monitoring and quality assurance of data ✓ Monitor & supervise on-ground distribution, etc. ✓ Annual Review meeting with Local Teams and other associated entities to ensure continuous improvements in the project activity
Distributor / Operational Team (Local Representative)	✓ To support & assist CME in achieving the stated goal of the project activity ✓ Assist and facilitate CME in baseline data collection, efficiency testing, data of biomass consumption for new ICS through sampling survey, etc. ✓ To be the local representative and communicate, act, and engage in implementation activities of project activity ✓ To identify and deploy suitable local teams and resources for ICS distribution, data collection, and regular spot-checks at households, etc. ✓ Assist and facilitate CME during the training of the Operational Team and capacity building across the end users. ✓ To bridge any gap between end users of ICS and CME to ensure the smooth operation of the program to achieve the overall objective of the project activity

	ICS Distributor(s)–who will be responsible for deploying the ICS at the household and registering the end user in the digital tool. They will also be responsible for giving demonstrations of ICS use, discussing with the end users on its benefits, and educating them on the continued use of ICS and discontinuation of the use of conventional/traditional open firing practice. They will also conduct periodic check at households to gather feedback, address any technical concerns, collect necessary data, and transmit the information.
ICS Manufacturer or Supplier	✓ To design and develop ICS as per the required standard ✓ To provide technical parameters and manufacturer's efficiency etc. at the time of supply ✓ To educate and train the team on the installation (delivery), uses, handling, etc. of the ICS in households.

The following diagram represents the management structure of the VPA. This structure may still be amended.



Cookstove Flow Chart

Powerstove will prioritize the appointment of a local implementation partner for the delivery of ICS and local men's and women's teams will be contracted and trained for the implementation of ICS. This will boost local employment and the income of local people. Awareness about the implementation and use of the ICS will be provided to the local community through awareness programs. Powerstove Energy will conduct the

distribution of ICS door-to-door or by selecting a dedicated central point accessible to the intended user. Powerstove Energy will plan to deploy a dedicated team to train end users for the proper use of ICS and to educate users about the benefits towards climate with the use of ICS. The team will ensure the proper functioning of ICS and take feedback from users about ICS and address their concerns.

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1. Start date of VPA

The start date of the VPA has been set as 27/04/2023.

C.1.2. Expected operational lifetime of VPA

15 Years (5+5+5)

C.2. Crediting period of project

C.2.1. Start date of crediting period

01/07/2024¹⁹

C.2.2. Total length of crediting period

5 years (renewable twice), i.e. from 01/07/2024 to 30/06/2029.

¹⁹ Two years retroactive from tentative date of registration

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1. Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in [Appendix 1](#), ongoing monitoring is summarised below.

PRINCIPLES	MITIGATION MEASURES ADDED TO THE MONITORING PLAN
Principle 1. Human Rights	Not Required
Principle 2. Gender Equality	The CME will monitor the number of people employed by the project, categorized by gender, to ensure equal opportunities for both women and men, and to maintain equal pay for work of equal value. During verification, employment records will be provided as supporting documents
Principle 3. Community Health, Safety and Working Conditions	When installing, operating, and maintaining the ICS that have been provided to and placed in the household within the project area, the CME will verify and oversee health and safety protocols. In addition, the implementor will start and keep up a customer complaint and grievance form to record any issues that are reported pertaining to health, safety, and working conditions, along with the mitigation strategies that have been used. Maintenance records will be provided as supporting documentation for examination during verification.
Principle 4.1 Sites of Cultural and Historical Heritage	Not Required
Principle 4.2 Forced Eviction and Displacement	Not Required
Principle 4.3 Land Tenure and Other Rights	Not Required
Principle 5. Corruption	Not Required

Principle 6.1 Labour Rights	Employees of the project will sign contracts or work agreements outlining the necessary working agreements. Employment declaration will be provided.
Principle 6.2 Negative Economic Consequences	Not Required
Principle 7.1 Emissions	Not Required
Principle 7.2 Energy Supply	Not Required
Principle 8.1 Impact on Natural Water Patterns/Flows	Not Required
Principle 8.2 Erosion and/or Water Body Instability	Not Required
Principle 9.1 Landscape Modification and Soil	Not Required
Principle 9.2 Vulnerability to Natural Disaster	Not Required
Principle 9.3 Genetic Resources	Not Required
Principle 9.4 Release of pollutants	Not Required
Principle 9.5 Hazardous and Non-hazardous Waste	Not Required
Principle 9.6 Pesticides & Fertilisers	Not Required
Principle 9.7 Harvesting of Forests	Not Required
Principle 9.8 Food	Not Required

Principle 9.9 Animal husbandry	Not Required
Principle 9.10 High Conservation Value Areas and Critical Habitats	Not Required
Principle 9.11 Endangered Species	Not Required

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The project respects the key gender issues and requirements of gender-sensitive design and implementation of the project. The project is aimed to replace conventional cook stoves with Improved cook stoves. This will result in reducing use of firewood consumption.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	The VPA under the programme of activity is distributing the improved cook stoves to households/communities wherein the women are the main users therefore the project is align with the cited policy above which ensures the women participation in smokeless chulas. The project does not involve in any form of based on gender, race, religion, sexual orientation or any other basis as per the country policies, strategies and best practices.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	No gender expert will be required for the Gender Safeguarding Principles & Requirements, as this requirement is not mandatory. However, the team will redouble its efforts to fit the project into the gender policy required by the GS methodology.

Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?

No gender experts will be present at the Stakeholder Consultation, as this requirement is not mandatory. However, the sustainable carbon team, which will be present on the day of the consultation, has extensive experience in conducting this type of meeting, and will follow the Gold Standard Stakeholder Consultation and Engagement Requirements, which includes gender guidelines, and specifies which social groups must be included in the consultation. Therefore, the team will be able and willing to address and assist any gender issues at the Stakeholder Consultation.

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1. Summary of stakeholder mitigation measures

As part of the project, a physical Stakeholder consultation meeting was conducted on the 07/04/2024 in Pentagon shopping center #28 Abakiliki Road G.R.A. Enugu opposite P.D.P Office for the project region, in line with GS4GG Requirements and Guidelines. The CME invited local stakeholders to participate in the stakeholder consultation process of the project through public notice, and emailed as well. In order to facilitate the invitees to understand the purpose of the meeting and relevant information of the project, the CME briefly introduced the key information of the project during the invitation. The Global Stakeholder feedback round has started from 03/06/2024 and end on 02/06/2024. No comments received during the SFR. Moreover, the CME tried to invite equal participation from all the genders of the society as well as all sections of society as a whole.

The meetings started with an opening speech by a representative of the project participant. He introduced all guests to the dais. The representative of the project participant explained the technical aspects of the project to the stakeholders. He also explained about social, environmental & economic benefits of the project. He also elaborated about the carbon mechanism & its requirement for the current project. After the detailed discussions, the session was open to questions from stakeholders. Most of the questions were related to employment opportunities, economic development, benefits from the project to villagers, and other development activities.

The stakeholders are satisfied due to the health and environmental benefits and there are no negative comments from stakeholders.

For more details please refer Stakeholder Consultation Report.

E.2. Final continuous input / grievance mechanism

METHOD	INCLUDE ALL DETAILS OF CHOSEN METHOD (S) SO THAT THEY MAY BE UNDERSTOOD AND, WHERE RELEVANT, USED BY READERS.
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Continuous Input Grievance Expression Process Book (mandatory)	Expression book has been placed at office of Powerstove Energy in Nigeria. Stakeholders are free to voice their concerns via the Grievance Expression Book. By maintaining feedback book at the local office, it is ensured that stakeholders that don't have access to electronic media for expressing concerns / grievances are also able to share their concerns / feedback. Additionally, the end users always have an option to revert to the salesperson (representative of distribution/retail partners etc.) in case of any feedback / complaints with the product post distribution.
GS Contact (mandatory)	help@goldstandard.org
Other	Contact number: +234 818 198 7979

SECTION F. Eligibility and inclusion criteria for VPAs inclusion

All eligibility criteria set forth in the design certified real case VPA (GS 12677) are applicable to the real case VPAs in terms of technology (same ICS model), host country and other aspects. Therefore, the same criteria which are justified/substantiated in section A.1.1 and there is no change. Moreover, VPA is going through the validation cycle by VVB. At the time of inclusion of regular VPAs, the CME shall only describe how the regular VPAs comply with the eligibility criterion.

NO.	ELIGIBILITY CRITERION	DESCRIPTION/ REQUIRED CONDITION	DESCRIPTION OF THE VPA IN RELATION TO THE CRITERIA, MEANS OF VERIFICATION/SUPPORTING EVIDENCE FOR INCLUSION
1	Project Location	The geographical boundary of the VPA shall be located within the geographical boundary of the PoA (i.e. Nigeria)	VPA-DD section A.2, specifying location and boundary of the VPA. Evidence for inclusion: KML file.
2	Conditions to avoid double counting of Impacts, such as unique identifications of product and end user locations	A unique numbering system for devices (improved cook stove) will be applied in each VPA, assigning a unique serial number to each device and allowing to clearly identify for each device to which VPA it belongs.	Each cookstove installed in this VPA is provided a unique serial no. ensuring that they are uniquely identifiable to this project. These numbers are available in the distribution database which will be submitted during the verification.
3	Conditions to check the start dates of VPA through documentary evidence	The start date of the VPA shall not be before the PoA start date	The start date of the VPA has been set as 27/04/2023 which is not before then the start date of PoA, adhering to the requirements of 5.4.1 of GS Programme of Activity Requirements and Procedures v.2.1. The selected date can be supported by the end-user agreement.

4	Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardised baselines and the other applied methodological regulatory documents	The VPA shall meet the applicability requirements of the methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 4.0" and GS4GG Principles and Requirements.	The VPA complies with the applicability of the applied methodologies, the applied standardised baselines and the other applied methodological regulatory documents in the PoA, as supported in the section B.2
5	Conditions to ensure that VPA meet the requirements for demonstration of additionality	Each VPA within the PoA shall demonstrate additionality through the Gold Standard additionality criteria or the latest version of the CDM Methodological Tool for the demonstration and assessment of additionality	The VPA meets the requirements of clause 1.1.3 of the Positive List mentioned within the Community Services Activity Requirements v.1.2. The proposed project falls under the automatic eligibility list of projects for proving additionality. It is mentioned in the Annex B-Positive list that project activities composed of isolated units where the users of the technology/measure are households, where each unit results in ≤ 600 MWh of energy savings. Evidence for inclusion: Emission reduction sheet
6	Principles and Requirements	Conditions to ensure that VPAs systematically demonstrate additionality in accordance with Principles & Requirements	The VPA meets the requirements of clause 1.1.3 of the Positive List mentioned within the Community Services Activity Requirements v.1.2. Hence, it demonstrates the additionality in accordance with Principles & Requirements. The corresponding regular VPAs too would follow the same guidelines.

7	Conditions to confirm that VPAs are neither registered as project activities with other offset Schemes, included in other registered PoAs, nor the project activities that have been deregistered	Confirmation that the VPA is not registered with other carbon standards or it is not being reintroduced after deregistration.	A declaration by the CME will be provided that VPA is neither registered as a project activity with GS or any other carbon standards or as a VPA of another PoA. For project activities that have been deregistered, the CME must check and reject their inclusion.
8	Specification of the technology/measure such as the level and type of service, as well as performance specification based on, inter alia, testing/certification	The VPA will include the distribution and sale of highly efficient improved cookstoves. Each VPA will encompass the distribution and installation of efficient cookstoves to households and/or communities.	The VPAs included will undergo verification to ensure that the efficient cooking devices achieve over 20% thermal efficiency. Stove efficiency test results must be provided as evidence of meeting this criterion. The primary beneficiaries targeted should be households and/or communities, as outlined in the VPA-DD
8	Conditions to ensure no diversion of official development assistance	Verification of the absence of public funding or Official Development Assistance (ODA) from Annex I Parties in the VPA.	A declaration of non-use of ODA has been completed and submitted for the VPA. Documentation: Signed ODA form.
9	Condition to identify the target group (e.g. domestic/commercial/ industrial, rural/urban, grid-connected/off-grid), and where applicable, distribution mechanisms (e.g. direct installation)	The target groups for the VPAs shall include domestic users.	The VPA shall distribute cooking devices to domestic end users. The VPA's end user database should indicate that the recipients of their stoves are domestic users

Conditions related to undertaking local stakeholder consultation, safeguarding assessment, SDG contribution assessment in line with modalities defined in real case VPA	Stakeholder consultation and engagement will be done at the VPA level. This VPA shall conduct a safeguarding principles assessment in line with the Gold Standard Safeguarding principal assessment requirements. This VPA shall ensure SDG contribution assessment.	Each VPA conducted local stakeholder consultation with the key stakeholders in line with GS4GG Stakeholder consultation and engagement guidelines. The CME conducts a safeguarding principles assessment and demonstrated that the VPA has adhered to the safeguarding principles. Documentation: - Stakeholder consultation report - SDG contribution assessment in VPA Safeguarding principles assessment in the VPA-DD.
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10

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into [SECTION D](#) above. Please refer to the instructions in the [Guide to Completing](#) this Form below.

SOCIAL SAFEGUARDING PRINCIPLES		
Reference requirement	Question	Response
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project developer, its representatives and the Project disrespect internationally proclaimed human rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does this project undermine national or regional measures for the realisation of the right to development?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements. Please add text here...		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project incorporates a human rights-based approach.

For example, by describing how the project design:

- is informed by human rights analysis, including from UN human rights mechanisms (human rights treaty bodies, universal periodic review, special procedures)
- includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher)
- enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle)
- provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	☐ YES ☒ NO

<u>NOT FOUND.</u>		
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	☐ YES ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	☐ YES ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project potentially involve or lead to:

<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	adverse impacts on gender equality and/or the situation of women and girls?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk to gender equality and women's empowerment.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any potential risks to the workers' safety and health?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements. Please add text here....		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	construction and/or infrastructure development (e.g., roads, buildings, dams)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g., food, surface water purification, natural buffers from flooding)?	☐ YES ☐ POTENTIALLY ☒ NO

NOT FOUND.		
Briefly describe below how the project is addressing any identified risk related to community health and safety. Please add text here....		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	☐ YES ☒ NO
If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements. Please add text here....		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	activities adjacent to or within a cultural heritage site?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	alterations to landscapes and natural features with cultural significance?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	utilisation of tangible and/or intangible forms (e.g., practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	☐ YES ☐ POTENTIALLY ☒ NO

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	If answer to question above is "YES" or "POTENTIALLY" - are the communities made aware of their right under the law, scope and nature of proposed development and its potential consequences?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	If answer to question above is "YES" - does the project provide equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	If answer to question above is "YES", has project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	Does the project involve any risks related to involuntary relocation of people?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project potentially involve or lead to:

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	risk of forced evictions or involuntary relocation of people?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is “YES” or “POTENTIALLY”, - has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community? - has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is “YES” - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is “YES”, have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project potentially involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	uncertainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project potentially involve or lead to:

ERROR! REFERENCE SOURCE	affect areas where indigenous peoples are present (including project area of influence)	☐ YES ☐ POTENTIALLY ☒ NO
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NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	affect areas, land and territory claimed by indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above questions is "YES" or "POTENTIALLY", - Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people? - Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation? - Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	risk of forcibly removing indigenous people from their lands and territories?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" or "POTENTIALLY" - Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property? - Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ? - Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive?	☐ YES ☐ NO ☒ NA

	- Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions, and housing?	
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

ECONOMIC SAFEGUARDING PRINCIPLES

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate national laws, if available regarding non-discrimination in employment?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project allow child labor?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women,	☐ YES ☒ NO

<u>SOURCE NOT FOUND.</u>	people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?	
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project potentially involve or lead to:

(NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)

<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	use of forced labour?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	working conditions that do not meet national labour laws and international commitments?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	working conditions that may deny freedom of association and collective bargaining?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	absence of documented working agreements with all individual workers <i>if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.</i>	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE SOURCE NOT FOUND.</u>	use of migrant workers? <i>if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.</i>	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR! REFERENCE</u>	having no arrangements for basic services ²⁰ for workers?	☐ YES

²⁰ Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

<u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	<i>the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association</i>	☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	harassment, intimidation, and/or exploitation, especially in regard to women?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	use of child labour? (including third-party engaged workers)	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inadequate and verifiable mechanisms for age verification?	☐ YES ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	no processes and measures in place for the safety and health of project workers?	☐ YES ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No grievance mechanism available for workers to voice workplace concerns.	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	☐ YES ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Is there a risk of project failure during implementation or after project certification due to a lack of financial resources?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have potential negative impacts or pose a risk to the local economy?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here...

Would the project involve or lead to:

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	economic impacts (negative/detrimental) to the local economy?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

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<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	☐ YES ☒ NO
--	---	--

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	increase greenhouse gas emissions over the Baseline Scenario?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project pose a risk to the availability and reliability of energy supply to other users?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	negative impact on the availability and reliability of energy supply to other users?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE	negatively impact on the catchment area?	☐ YES ☐ POTENTIALLY ☒ NO
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NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.	<i>If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.</i>	
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.**ERROR! REFERENCE SOURCE NOT FOUND.**

ERROR! REFERENCE SOURCE NOT FOUND.**ERROR! REFERENCE SOURCE NOT FOUND.**

ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.	Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the project? <i>If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.</i>	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities?	☐ YES ☐ POTENTIALLY ☒ NO
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ERROR! REFERENCE SOURCE NOT FOUND.	if answer to above question "yes" or "potentially", does project adopt appropriate and culturally sensitive sustainable resource management practices?	☐ YES ☐ NO ☒ NA
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If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here...

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	☐ YES ☐ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here...

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	any potential risks that require emergency preparedness and response planning?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here...

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes" has any risks identified in the risk assessment?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Forestry (for example Afforestation/Reforestation) involving GMO planting? <i>Note - Forestry projects (for example Afforestation/Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.</i>	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE	any potential risk of pollutant release that cannot be avoided?	☐ YES ☐ POTENTIALLY ☒ NO
--------------------------------	---	--

NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes" or "potentially", has the project identified all potential pollution sources that may degrade the quality of soil, air, surface, and groundwater in the project area?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes" or "potentially", do the pollution prevention and control technologies and practices applied during the project life cycle align with national regulations or international best practices?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes", is there a monitoring plan to ensure that mitigation measures are implemented, and resources are protected?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE	the generation and management of waste materials?	☐ YES ☐ POTENTIALLY
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NOT FOUND.		☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	treatment, destruction, or disposal of waste material?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", does project has measures in place to address health risks?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	☐ YES ☐ POTENTIALLY ☒ NO
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements. Please add text here....		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the use of chemical pesticides?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous)	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project use fertilisers, and if so, are measures being taken to minimise their use and nutrient losses to the environment?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	chemical pesticides use for pest management?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of unsustainable forest management, including timber harvesting?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	☐ YES ☒ NO
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If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any risks to animal welfare?	☐ YES ☒ NO
	Animal welfare shall be ensured by providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity.	
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any potential risk of excessive or inadequate use of veterinary medicines?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the risk of administering synthetic growth promoters, including hormones?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	animal husbandry or harvesting of fish populations or other aquatic species? ²¹	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	☐ YES ☐ POTENTIALLY ☒ NO
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inappropriate spacing per animal and stocking rates per land unit?	☐ YES ☐ NO ☒ NA
<u>ERROR!</u> <u>REFERENCE</u> <u>SOURCE</u> <u>NOT</u> <u>FOUND.</u>	inadequate measures to address the specific needs of aquatic animals?	☐ YES ☐ NO ☒ NA

²¹ 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

ERROR! REFERENCE SOURCE NOT FOUND.	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries? If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	☐ YES ☐ NO ☒ NA
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If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have the risk of negatively impacting HCV areas and/or critical habitats?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	identified habitats as HCV areas and or Critical habitats?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	☐ YES ☐ NO ☒ NA

ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	☐ YES ☐ NO ☒ N/A
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here....

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	distortion of habitats of endangered species?	☐ YES ☐ POTENTIALLY ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to the above question is "yes", does the project plan to protect and enhance them?	☐ YES ☐ POTENTIALLY ☐ NO ☒ N/A
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here....		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here....		
Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	risk of introducing any alien species with a high risk of invasive behaviour regardless of whether such introductions are permitted under the existing regulatory framework?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	risk of potential accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbour alien species.	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	risk of spreading alien species into areas in which they have not already been established? ☐ YES ☐ POTENTIALLY ☒ NO
If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements. Please add text here....	

APPENDIX 2- CONTACT INFORMATION OF VPA IMPLEMENTER

Organisation name	Powerstove Energy
Registration number with relevant authority	RC 2624920
Street/P.O. Box	NDOLA CRESCENT, ZONE 5,
Building	SUITE 88, NANDU PLAZA
City	ABUJA
State/Region	ABUJA
Postcode	904101
Country	Nigeria
Telephone	-
E-mail	contact@powerstove.africa
Website	https://powerstove.africa/
Contact person	Okay Esse
Title	Chief Executive Officer
Salutation	Mr.
Last name	Esse
Middle name	-
First name	Okay
Department	Projects
Mobile	-
Direct tel.	-
Personal e-mail	okeyesse@yahoo.com

APPENDIX 3- LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:	N/A
Risk of change to the Project activities during Project Certification Period:	N/A
Land-use history and current status of Project Area:	N/A
Socio-Economic history:	N/A
Forest management applied (past and future)	N/A
Forest characteristics (including main tree species planted)	N/A
Main social impacts (risks and benefits)	N/A
Main environmental impacts (risks and benefits)	N/A
Financial structure	N/A
Infrastructure (roads/houses etc):	N/A
Water bodies:	N/A
Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:	N/A
Where indigenous people and local communities are situated:	N/A
Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance:	N/A

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

Not applicable

A4.2. Describe the Impacts of Design Change on the following

a. Additionality

Not applicable

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

Not applicable

c. Compliance with the monitoring plan of the applied methodology

Not applicable

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

Not applicable

e. Scale of the project activity

Not applicable

f. Stakeholder consultation

Not applicable

g. Sustainable development criteria

Not applicable

h. Safeguarding Assessment

Not applicable

i. Compliance with applicable legislation

Not applicable

Revision History

Version	Date	Remarks
2.3	Dd/mm/yyyy	Editorial changes in line with V2.1 of the Safeguarding Principles and Requirements
2.2	21 June 2023	Editorial changes in line with V2.0 of the Safeguarding Principles and Requirements
2.1	14 April 2023	Integrated the design change memo as annex of the document.
2.0	4 May 2022	
1.1	7 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption